ADEQ Arizona Department of Environmental Quality

Janet Napolitano, Governor
Stephen A. Owens, ADEQ Director

FACT SHEET

PG&E Topock Compressor Station - Topock Goundwater Study

April 2005

Information from the Arizona Department of Environmental Quality (ADEQ) to Arizona residents near the Pacific Gas and Electric (PG&E) Natural Gas Compressor Station.

BACKGROUND AND RECENT DEVELOPMENTS

The communities of Topock, Arizona and Golden Shores, Arizona, are situated across the Colorado River from the PG&E Topock Compressor Station which is located in San Bernardino County, California.

Figure 1 - PG & E Topock Compressor Station

A plume of hexavalent chromium has been identified in the groundwater at the compressor station which is located 15 miles southeast of Needles, California. Work is being performed by PG&E under the direction of the California Department of Toxic Substances Control (DTSC). The plume has been detected in recently installed wells that are located less than 60 feet west of the Colorado River. To date, 70 monitoring wells, 4 extraction wells, and 2 injection wells have been installed at the site in California. Groundwater extraction began in March 2004 as part of interim measures to contain the plume and protect the Colorado River. PG&E proposes to treat extracted groundwater and re-inject the treated water back into groundwater.

ADEQ INVOLVEMENT

On March 17, 2004, ADEQ Director Steve Owens sent a letter to Wayne Nastri, Regional Administrator, USEPA Region 9, expressing concern about potential impact of hexavalent chromium (Cr^6) in groundwater on Arizona resources and Colorado River water uses. In September 2004, in a letter to the California Regional Water Quality Control Board, Director Owens stated, "I'm particularly troubled that the plume of hexavalent chromium may have moved beneath the river and may now be contaminating Arizona groundwater."

In February, 2005, Cr^6 was detected at a concentration of 354 parts per billion (ppb) in a newly installed well located 60 feet west of the Colorado River, heightening ADEQ concerns.

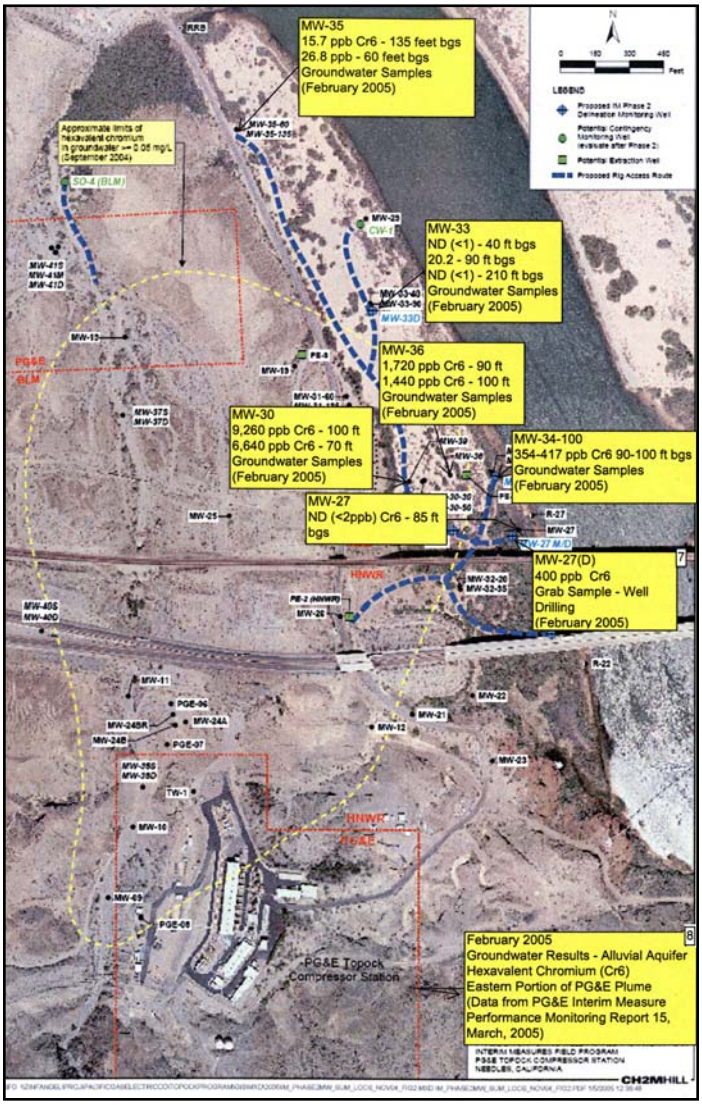

Figure 2 - PG & E Topock Plume Map

Concentrations have since increased to 417 ppb. In response to the new findings, on March 14, 2005, ADEQ Director Steve Owens wrote California Department of Toxic Substance Control (DTSC) Director, B.B. Blevins, "The potential threat to groundwater and surface water resources has increased significantly…the new findings in MW-34-100 raise additional concerns about the potential surface water impacts to the Colorado River". Although PG&E is performing groundwater extraction on the California side of the river to contain the plume, the eastern edge of the plume is undefined and ADEQ is concerned that this effort may not be sufficiently protective of groundwater and surface water in Arizona.

TOPOCK GROUNDWATER STUDY

ADEQ will conduct a study funded by PG&E to determine if groundwater in Arizona has been contaminated by the plume of Cr^6. Hexavalent chromium has been detected in groundwater in the vicinity of Topock, Arizona in low concentrations. To date, no industrial sources have been found by ADEQ in Topock on the Arizona side of the Colorado River. The Topock Groundwater Study will help to determine if the Cr^6 in Arizona groundwater is naturally occurring or from the PG&E Topock Compressor Station. The study will examine groundwater flow on the Arizona side of the river to determine if the Cr^6 plume may have migrated under the river and impacted water supplies in Arizona. The study will involve sampling domestic, industrial and public water supply wells in the communities of Topock and Golden Shores, Arizona.

Wells that have been selected for the study are identified in Figure 3.

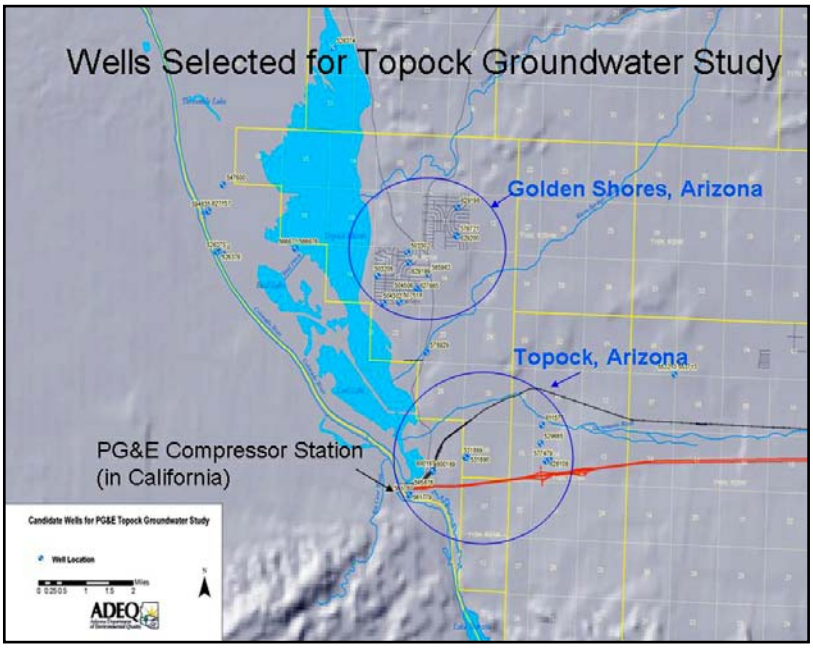

Figure 3 - Topock Groundwater Study Map

COLORADO RIVER SURFACE WATER STUDIES

In April 2004, ADEQ collected surface water samples in the Colorado River and Lake Havasu to assess if Cr^6 from the PG&E plume was present in surface water. Three samples were collected in the Colorado River at Topock, and six in Lake Havasu. Hexavalent chromium was not detected in the surface water samples collected by ADEQ. Sampling locations are shown in Figures 4 and 5.

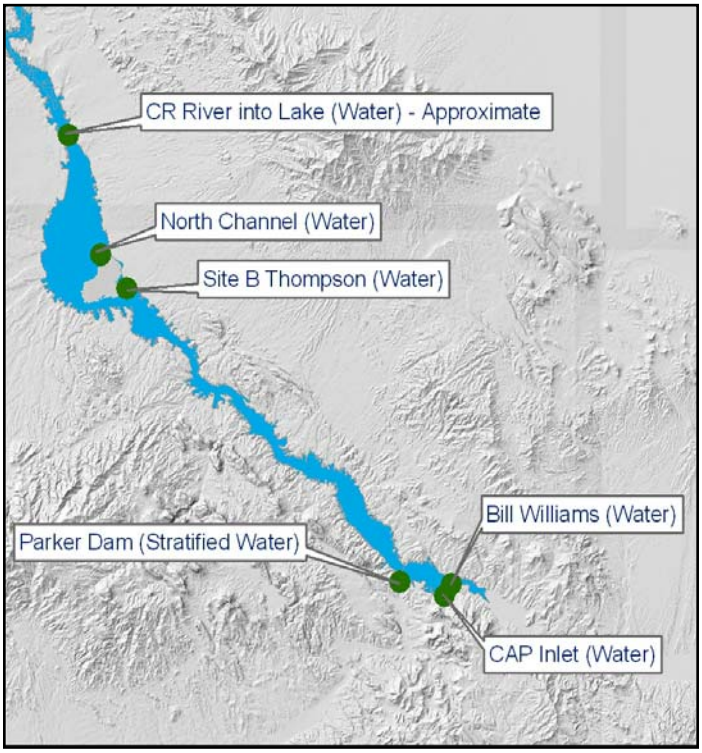

Figure 4 - Lake Havasu Sampling Map

Figure 5 - Topock Colorado River Sampling Locations

Additional information regarding sampling can be found on the ADEQ website, www.azdeq.gov under key topics - Colorado River Studies/Topock Groundwater Study.

PG&E currently samples the Colorado River at three locations on a monthly basis, see Figure 6.

Figure 6 - River Sampling Locations

To date, Cr^{6} has not been detected in the river. In response to February 2005 groundwater findings, ADEQ has requested expansion of the current PG&E river sampling program, to make sure that the Colorado River and Lake Havasu are protected from the plume. The sampling locations and sampling methods will be the subject of a technical workgroup meeting on April 20, 2005 in which ADEQ will participate.

TOPOCK GROUNDWATER STUDY AND WELL OWNERS

What can owners of selected wells expect?

Owners of wells that have been selected for the study have been notified in writing by ADEQ and access agreements have been sent out and signed. ADEQ and its contractor will begin work on the Topock Groundwater Study in May 2005.

We will be working in the area about 6 times over an 18-month period of time. Some well heads may need to be modified/upgraded for accurate water level measurement. ADEQ will visit the wells once for collecting water quality samples. For most wells, sample collection will take about an hour. Well owners may be asked to keep a hose running overnight before sampling days. Wells in the study will be accessed 4 times for water level measurements, a procedure taking less than one hour per visit. Well owners will be asked to abstain from use of the wells for 12 hours prior to water level measurements, and will be notified at least one week prior to each event.

INFORMATION ABOUT CHROMIUM

What is chromium and what are the uses?

Chromium is a naturally occurring element found in rocks, animals, plants, soil and in volcanic dust, rock and gases. Chromium is present in the environment in several common forms: Cr^{0}, Cr^{3}, and Cr^{6}. No taste or odor is associated with chromium compounds (ATSDR). Cr^{3} occurs naturally in the environment and is an essential nutrient. Cr^{6} is generally produced by industrial processes, but naturally occurring Cr^{6} has been documented in Arizona groundwater.

Health and Exposure Information

Exposure to chromium occurs from inhalation (breathing) contaminated air, or from ingesting contaminated food or water. Cr^{6} is a known carcinogen and can damage the nose at high levels. The Arizona drinking water standard for total chromium is 100 ppb.

Where can I find out more about health concerns relating to hexavalent chromium?

For more information about hexavalent chromium health and exposure visit :

http://www.atsdr.cdc.gov/tfacts7.html

or call (888)-422-8737

Residents of Golden Shores and Topock may also contact the Arizona Department of Health Services:

Will Humble

Bureau Chief of Epidemiology and Disease Control

(602) 364-3855

humblew@azdhs.gov

How can I get involved?

As the study progresses, individual well owners will be notified of the results of the potable well sampling. ADEQ will keep the community involved through newsletters and a public meeting, which will be held after the water quality sample results have been obtained. Our target for this meeting is October 2005. Findings will also be posted on our website at www.azdeq.gov under Key Topics - Topock Groundwater Study.

FOR MORE INFORMATION

If you would like to receive newsletters and notices of community meetings, please call:

Wendy Flood
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flood.wendy@azdeq.gov
(602) 771-4410 or 1(800) 234-5677

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Hearing impaired persons may call our TDD line at (602) 771-4829.

GLOSSARY

Contamination - Any hazardous substance released into the environment.

Extraction Well - A well specifically designed to withdraw groundwater or soil gas for treatment.

Surface Water - Waters above the surface of the lithosphere such as rivers, dry washes, streams, creeks and lakes.

Groundwater - Water found beneath the earth's surface that fills pores between materials such as sand, clay or gravel. Groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.

Plume - A body of contaminated groundwater flowing from a specific source.

Drinking Water Standard/Maximum Contaminant Level - A federal or state enforceable standard set to ensure that water is safe for drinking.

Well Heads - The top of a well; typically above ground where casing ends and piping for a pump exits the well.

Aquifer - Earth material containing sufficient groundwater that the water can be pumped. Fractured rocks and unconsolidated sands and gravel yielding water at a rate of 5 gallons per day.

Alluvium - unconsolidated sediments, including sand, gravel and silt deposited by streams, washes and run-off.

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